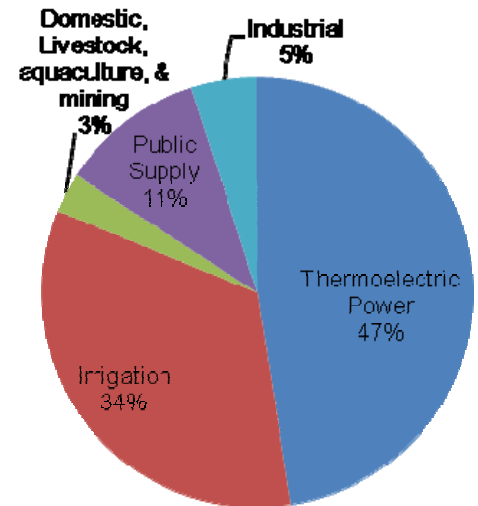




Water-use estimates are an important part of the strategic planning for our nation. This helps to direct conservation efforts and to prepare for a growing population's water needs. At times, it is necessary to determine who is using the water, and who is providing for the replacement of the water to our national groundwater supply.

Who is really using the water?

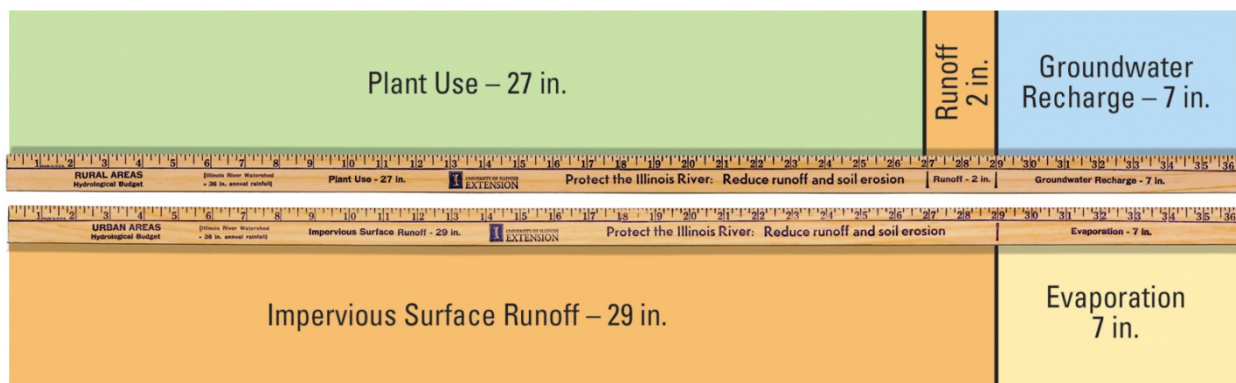
- Thermoelectric power plants withdraw 195,000 million gallons of water per day. Ninety-nine percent of that was surface water withdrawals.
- Withdrawals for irrigation were 137,000 million gallons per day, though this has remained stable since 1985 despite an 8% increase in acres irrigated.
- Public water suppliers, usually supplying water to those in urban areas, withdrew 43,300 million gallons per day.
- Industrial withdrawals were 19,700 million gallons per day, representing steady decline since 1985.
- Combined usage for livestock, aquaculture, and mining was less than 12,000 million gallons per day.



Based on trends analyzed in five year increments by the US Geological Survey, public water withdrawals have increased steadily since 1950. Though population increased 90% from 1950 to 2000, water usage for public withdrawals increased 127% during the same time period.

Perhaps part of this significant increase is the way that urban areas choose to use their water and how they provide for its return to the groundwater supply. For example, it takes 684,000 gallons of water to irrigate one acre of a golf course. The average golf course is 75 acres; that's more than 51 million gallons of water!

According to University of Illinois Extension Specialist, Bob Frazee, urban areas have a much larger issue with regard to water use as the 81% of precipitation becomes run off. In comparison, rural areas only have 5% run off. This means much more opportunity for soil erosion and pollution from surface contaminates in urban areas.



Source: FARMWEEK

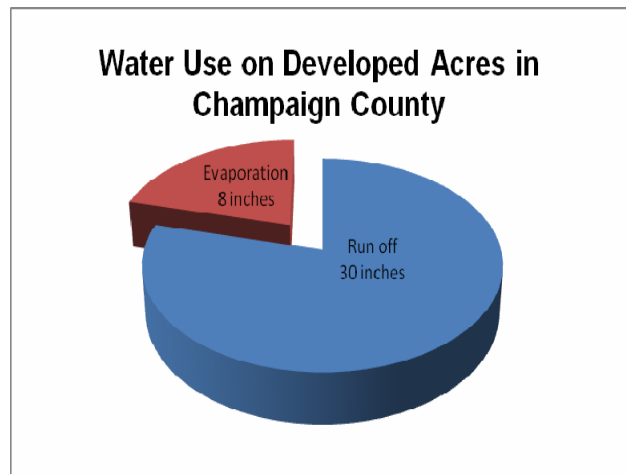
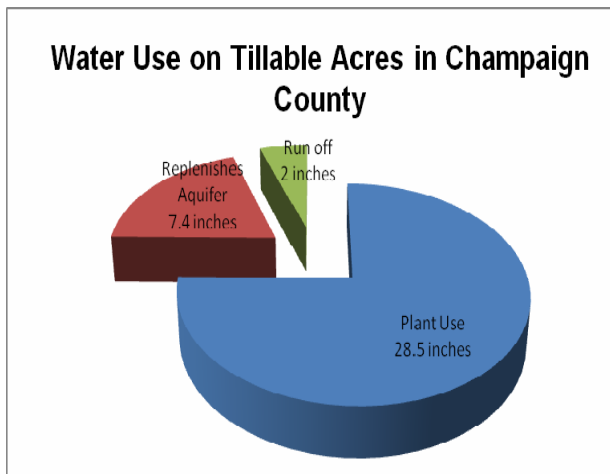
WATER USE AND ETHANOL

Agricultural use is one of the smallest water use sectors and it is providing the largest percentage of groundwater recharge of all the sectors. To demonstrate this, we will use Champaign County as an example. Champaign County, IL consists of 577,066 tillable acres and 60,890 developed acres. The average yearly rainfall is 38 inches per year equating to 658,276 million gallons of rain for the county each year.

Champaign County is producing 180 bushels of corn per acre. If producers planted corn on half of the tillable acres in the county, they could produce almost 51 million bushels of corn per year. Utilizing all the acreage for corn production would yield nearly 104 million bushels.

One tillable acre in Champaign County is giving back approximately .203 million gallons of water to the aquifer. As a whole, tillable acres in the county return 117,000 million gallons of water to the aquifer annually. That averages to around 320 million gallons of water returned to ground water supplies per day.

A typical ethanol plant in Illinois is producing 100 million gallons of ethanol per year. To accomplish this, it uses 400 million gallons of water and 36 million bushels of corn per year. Even if every tillable acre was planted in corn and every bushel of corn used to produce ethanol, ethanol production would only utilize .3% of the water that recharges the aquifer from those same acres.



Producing one gallon of ethanol only takes 4 gallons of water. In comparison:

- It takes 1,851 gallons of water to refine a 42 gallon barrel of crude oil.
- It takes 1,500 gallons of water to process one barrel of beer.
- It takes 24 gallons of water to make one pound of plastic.
- It takes 9.3 gallons of water to process one can of fruit or vegetables.

Illinois is a water rich state. The ample amount of cropland replenishes ground water and minimizes run off. Illinois should be allowed to contribute to the renewable energy needs of a nation considering the minimal impact that the ethanol industry has on our groundwater supply.